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GROUP 1600

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APPLICANTS: Comb *et al.*

ASSIGNEE: CELL SIGNALING TECHNOLOGY, INC.

SERIAL NUMBER: 09/535,364

EXAMINER: P. Ponnaluri

FILING DATE: March 24, 2000

ART UNIT: 1627

FOR: PRODUCTION OF MOTIF-SPECIFIC AND CONTEXT-INDEPENDENT ANTIBODIES
USING PEPTIDE LIBRARIES AS ANTIGENS

August 9, 2002
Beverly, Massachusetts

BOX Non-fee Amendment
Assistant Commissioner for Patents
Washington, D.C. 20231

#13
BUP
8-16-02

**RESPONSE TO RESTRICTION REQUIREMENT
(37 C.F.R. §1.143; §1.111)**

This paper is in response to the July 15, 2002 Office Action and Restriction Requirement issued in the above-identified patent application. This Response is filed subsequent to a telephone call to the Examiner regarding the outstanding restriction requirement. The present paper is due on or before August 15, 2002.

REQUEST FOR RECONSIDERATION

Pursuant to 37 C.F.R. §1.143, Applicants respectfully request reconsideration of the outstanding restriction requirement with respect to pending product claims, Groups V-VIII (claims 27-38). As discussed in more detail below, these groups of claims, which are drawn to a preferred species/subsets of the novel class of antibodies provided by the invention, each define a common essential characteristic of the claimed subject matter and are connected in design, operation, and effect. The claimed antibodies are all designed to, and operate to, recognize post-translationally modified signal transduction motifs present in a plurality of signaling peptides/proteins within a genome. Given the identical classification of these groups of species and the shared/related essential characteristic noted above, different fields of search for these antibodies is not required. Accordingly, Applicants respectfully request that the reasonable number of species encompassed by generic claim 27 be retained and prosecuted in the present

case, subject to the requirements of 37 C.F.R. §1.141. In conjunction with the present request for reconsideration, Applicants hereby provisionally elect the claims of Group V (kinase consensus/phosphorylated motifs, claims 27-29 (in part), 30-31, 32 (in part) and 33-36) for prosecution in the present case. 37 C.F.R. §1.143; 35 U.S.C. §121.

Applicants acknowledge that the present Restriction Requirement supersedes the May 3, 2002 restriction issued by prior Examiner S. Tizio, since that paper and Applicants' Preliminary Amendment crossed in the mail. Claims 19, 21-22, and 27-38 are presently pending. The present case pursues subject matter (a novel class of antibodies) originally disclosed but not pursued in the recently-allowed, related parent case (the claims of which are drawn to methods of producing the novel class of antibodies).

The Examiner has required that the presently claimed subject matter be restricted to one of the following:

Groups I-IV (claims 19-22): drawn to profiling methods in class 435, subclass 4;

Group V: (claims 27 (in part); 28-29 (in part), 30-31, 32 (in part) and 33-36): drawn to a motif-specific, context-independent antibody that binds a phosphorylated kinase consensus motif (class 530, subclass 387.1);

Group VI: (claims 27 (in part); 28-29 (in part), 30-31, 32 (in part) and 33-36): drawn to a motif-specific, context-independent antibody that binds a phosphorylated protein-protein binding motif (class 530, subclass 387.1);

Group VII: (claims 27 (in part), and 37-38): drawn to a motif-specific, context-independent antibody that binds an acetylated motif (class 530, subclass 387.1); and

Group VIII: (claim 27 (in part)); drawn to a motif-specific, context-independent antibody that binds a methyalted motif (class 530, subclass 387.1).

Among these claims, the Examiner notes that claim 27 (among others) is generic.

The Examiner asserts that the subject matter of Groups I-IV (drawn to process of use) is independent and distinct from that of Groups V-VIII (drawn to product). MPEP §806.05(h). Although Applicants disagree, no reconsideration of restriction between these groups is

presently requested.

The Examiner also asserts that the subject matter of Groups V, VI, VII, and VIII (each drawn to a preferred subset/species of product) are independent and unrelated because they are not disclosed as capable of use together and have different modes of operation, different functions, and different effects. MPEP §806.04. Applicants respectfully request that the Examiner reconsider the restriction between these groups of products, which are, in fact, related in design and operation, sharing an essential common feature.

Applicants' invention provides, in part, a novel class of antibodies that are both motif-specific and context-independent. The antibodies of the invention are designed to, and operate to, recognize short modified motifs that occur in a plurality of peptides or proteins within a genome, such as motifs typically conserved among cell signaling proteins (*i.e.* they are motif-specific and yet context-independent). It is this common essential feature of the claimed antibodies that solves the limitations of the prior art (described in the Background of the Invention at p. 2-6). This characteristic relates the claimed antibodies, regardless of the specific *type* of post-translational modification to which they are targeted (*e.g.* phosphorylation, acetylation, or methylation). *See* MPEP §806.03. This relation is further reflected by the fact that the antibodies of Groups V-VIII are classified in the same class (530) and subclass (387.1).

The claims of Groups V, VI, VII, and VIII are each drawn to a preferred species/subset of the claimed antibodies, namely the species of phosphorylation, acetylation, and methylation – specific antibodies. Within the phosphorylation-specific species are two preferred sub-species, namely, antibodies binding kinase consensus substrate motifs and protein-protein binding motifs. Each of these preferred species of antibodies are related by common design, operation, and effect. *See* MPEP §808.01. Again, the antibodies are all designed to, and operate to, recognize – in a context-independent fashion - a post-translationally-modified motif conserved among cell signaling proteins. Indeed, the Examiner has previously recognized (in the allowed parent case) the relatedness of kinase consensus substrate and protein-protein binding motifs as preferred sub-species of phosphorylated motifs.

Presently, the Examiner has recognized that claim 27 is generic to the preferred species of antibodies to which the claims of Groups V-VIII are drawn. Applicants are entitled to retain a

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reasonable number of species, specifically claimed in different claims within the present application, provided that a generic claim is held allowable. 37 C.F.R. §1.141. Presently, Applicants respectfully request that the number of species (three) to which the claims are drawn, and for which claim 27 is generic, are reasonable. Different fields of search for these species are not required, since the subject matter claimed shares a common essential feature, and all species are in the same class and subclass. Applicants should not be required to incur the expense, inconvenience, and delay associated with pursuing each of these related species in a separate divisional application. Accordingly, it is respectfully requested that the requirement for restriction between the claims of Groups V-VIII be withdrawn, and that Applicants be entitled to prosecute generic claim 27 to allowance, retaining the reasonable number of preferred species of Groups VI-VIII in the present case.

The present claims are believed to be in condition for immediate allowance. Early and favorable consideration leading to prompt issuance of these claims is earnestly solicited. If there are any questions regarding these remarks, the Examiner is requested to call the undersigned attorney at the telephone number provided.

Respectfully submitted,



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Dated: 8/9/02

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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence, and any documents referred to as attached hereto, is/are being transmitted to the United States Patent and Trademark Office, Art Unit No. 1627, dedicated Facsimile Number: (703) 308-4315 on this 9th day of August, 2002.

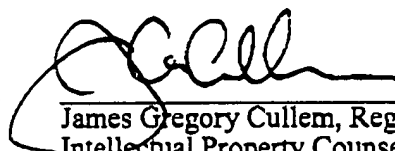

James Gregory Cullem, Esq.

August 9, 2002
Beverly, Massachusetts

Attached hereto for filing in the above-identified patent application is/are:

☒ Response to Restriction Requirement (4 pages);

Respectfully submitted,



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